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# Monsanto

LAW DEPARTMENT

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May 14, 1982

Robert G. Kuykendall, Manager  
Division of Land and Pollution Control  
Illinois Environmental Protection Agency  
2200 Churchill Road  
Springfield, Illinois 62706

Dear Mr. Kuykendall:

Re: Monsanto Company, W. G. Krummrich Landfill

This response is to the Illinois Environmental Protection Agency's (IEPA) request for information contained in Mr. Constantelos' letter to Mr. J. W. Molloy dated April 16, 1982. My review of section 4 of the Illinois Environmental Protection Act, Ill. Rev. Stat., ch. 111-1/2, section 1004, cited in the letter, indicates that the IEPA lacks authority to require submission of the information requested. However, without waiving any objections to IEPA's assertion of authority, Monsanto, in the spirit of cooperation, is providing this response to IEPA's request.

The term "Krummrich landfill," refers to a closed sanitary landfill identified as the W. G. Krummrich landfill in its 42 U.S.C. section 9603(c) notification and Illinois Pollution Control Board Rule 318(c) submission (Exhibit 1). Reference to materials deposited in the sanitary landfill or materials is defined to mean some or all of the material remaining after the manufacturing of product by Monsanto Company.

Much of the information requested has already been provided in documents filed earlier with the EPA and/or the Illinois Environmental Protection Agency (IEPA). In the event these documents are not readily available to you, I have enclosed copies and reference such as exhibits.

A review of available records does not present a uniform continuity of information. As you know, governmental recordkeeping requirements are of relatively recent origin. In their absence, records maintained reflect the specific determination by various departments of their own specific needs. Once these needs had been fulfilled, such records were disposed of. In any event, Monsanto like other major corporations and, indeed, the state government itself, follows a Records Management Manual which

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requires periodic review of files and disposal of records no longer needed. Therefore, much of the information requested is no longer available. Included herein is information concerning the volume and type of material in the Krummrich landfill, information relevant to the clay cap of the landfill, a discussion of Monsanto investigation and work at the landfill, and Monsanto's present course of action.

Information reflecting Monsanto's analytical methodologies used in analysis of data from the November 12, 1981, sampling by EPA, and the IEPA split with Monsanto, is not included herein. It is Monsanto's opinion that a technical discussion of Monsanto practices is appropriate for a meeting of technical persons and submission of written information is outside the authority of IEPA to request and also inappropriate. Furthermore, Monsanto's dedication to developing the highest level of sophistication in its chemical analyses has resulted in its development of proprietary information in this field which Monsanto intends to maintain as confidential.

In a historical context, the Krummrich landfill is a closed and clay capped sanitary landfill on Monsanto property adjacent to and between an idle non-Monsanto landfill and a parcel of land which itself is adjacent to the Mississippi River. The Krummrich landfill began operation about 1957 and operated continuously without significant change until 1973. During this phase of operation, the landfill received various wastes from Monsanto Company operations. What records that may have been kept have since been destroyed, consistent with Monsanto's Records Management Manual.

In 1979, pursuant to a request made by Rep. Robert Eckhardt of the U. S. Congress, information was gathered concerning waste disposal practices during the period 1950 through 1973. As requested, where records were unavailable, some reliance was placed upon recollections of long-time employees. Therefore, the resulting compilation of data depicts a best guess at what volume and character of wastes were probably deposited in the landfill during its operating existence. This information concerning the Krummrich landfill was provided to the IEPA Division of Land and Noise, and a copy is attached hereto as Exhibit 2.

Interviews with plant personnel indicate that in the late 1960's through early 1970 representatives from the State of Illinois made periodic visits to the landfill and took samples from its monitoring wells. In addition, it is our belief that monitoring results from these wells were sent to the IEPA by Monsanto. A copy of one such transmittal is enclosed for your reference (Exhibit 3). These sample results showed little significance and after some period of time the State representatives ceased their sampling activities and Monsanto stopped its monitoring program.

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On or about July 1, 1970, the Illinois Environmental Protection Act was passed prohibiting refuse collection and refuse disposal operations, except for refuse generated by the operator's own activities, without a permit granted by the IEPA. The Krummrich landfill site fell within the Title 5, Section 21(e) exemption and was not required to obtain a permit from the State of Illinois (Exhibit 4). On July 27, 1973, Illinois Pollution Control Board promulgated Rules and Regulations for solid waste.

Monsanto's practices comported with the new regulations. Attached as Exhibit 5 is a list of materials deemed to be appropriate for disposal under the newly promulgated regulations. The list (Exhibit 5) was provided to representatives of the Collinsville Land Pollution Control Surveillance Office and the Springfield Land Pollution Control Section on October 24, 1975, during a visit, on that date, to the W. G. Krummrich Plant. Memoranda suggest that the representatives were to return on October 28, 1975, to collect water samples from five landfill test wells as had been done on several prior occasions. Data from this possible return to resample wells is not present in Monsanto files.

From review of Monsanto's files, we find that information on the location of these five wells and three sets of well data were provided to Illinois pollution control officials (Exhibit 3). Monsanto's records, presently identified as applicable to the request for information, do not contain any other data from these wells.

The Krummrich landfill was operated from the required compliance date in 1974 until 1977 consistent with the new regulations. In 1977 Monsanto voluntarily ceased operation of the landfill and began closure. This voluntary closure was not in anticipation of EPA or IEPA regulations or possible adverse actions by either, but was conducted to insure proper securing of the landfill consistent with technology and expertise at the time.

Late in 1976, in compliance with Rule 318(b), Monsanto determined to utilize an outside consultant to address the proper method of closure and securing the landfill to minimize its effect, if any, on the environment. The consultant, D'Appolonia Consulting Engineering, Inc., was retained by Monsanto in August 1977 for an in-depth investigation of the landfill and recommendation of the method for closure. As part of the investigation, 19 test wells were drilled and geologic and hydrologic data was obtained and analyzed. As a result of this investigation, D'Appolonia recommended the landfill be covered with a clay cap. Monsanto immediately began work on installation of the clay cap (Exhibit 6).

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The IEPA conducted several visits during this period of closure and monitoring. Several wells were sampled with bailers, and resistivity tests were conducted on the landfill. Monsanto does not know the results of these tests.

In April 1981, Monsanto became suspicious that test well data being obtained from the test wells installed by D'Appolonia was non-representative of the actual groundwater quality. At this time, a Monsanto hydrogeologist became involved with the sampling program and methodology of sampling. Empirical tests of water level response on the wells during 1981 indicated the wells were of little, if any, use.

Monsanto's conclusions were that these test wells had failed because of test well materials of construction and lack of proper development of these test wells. The well screens are believed to be damaged and the test wells are filled with sediment and cannot be re-developed. As a result of the above, and the fact Monsanto is dealing with a confined aquifer system, an essentially stagnant fluid is trapped within the steel casing above the sediment filled screened zone. Furthermore, it has been determined upon review that sampling procedures used with these wells were improper. The sampling procedures involved the use of a bailer to obtain a sample of the static fluid. The test wells were not purged prior to sampling, therefore, a stagnant sample was obtained. It is Monsanto's opinion that the stagnant sample is not representative of the water quality within the aquifer at any given time. Stagnant wells are very susceptible to higher concentration of lighter fractions within the potential suite of contaminants that may be present. Additionally, it is believed that the sampling bailer was not flushed adequately between obtaining samples between wells, which undoubtedly led to cross contamination.

In October 1981, Monsanto was advised by the IEPA of seepage observed and sampled by IEPA during September at a remote beach at the Mississippi River's edge on property owned by Monsanto. Monsanto, in cooperation with the IEPA and the EPA, obtained split samples (obtained in November 1981) with the EPA. The results were submitted to EPA and IEPA on March 30, 1982 (Exhibit 7).


In late December 1981, Monsanto retained Law Engineering Testing Company to drill and install 2" test wells at Monsanto's direction in the land area between the Mississippi River and Monsanto's landfill. Monsanto then retained D'Appolonia to install, at Monsanto's direction, 4" test wells within the landfill proper. This activity took several months and is nearing completion.

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Monsanto is presently negotiating with an engineering company in connection with a geohydrologic investigation of an area adequate to evaluate any impact of the Krummrich landfill on the environment. Since these negotiations are still in progress, and it is possible the work may be let or performed on a different basis, confidential treatment of this information is requested. The investigation will involve a literature search and review; existing test well development; in situ and laboratory permeability tests; conducting pH, conductivity, temperature and total organic carbon tests; and measurement of water levels. Monsanto anticipates the program to begin mid-summer 1982. Upon completion of the above, Monsanto will be in a position to evaluate what, if any additional work may be necessary.

In November 1981, Monsanto requested a technical meeting to review the analytical results of the split samples. A meeting with EPA and IEPA occurred in March 1982. At this meeting Monsanto's results of analyses of the split samples were presented. In addition, Monsanto presented results from sampling the Mississippi River upstream and downstream of Monsanto's river property. This data clearly indicates the absence of any negative impact to the environment or health.

Sincerely,

  
Brent J. Gilhausen  
Environmental Attorney

jf

cc: J. W. Molloy

Enclosures